

JAVASCRIPT OBJECTS



Objects

2

- We have seen how we can define primitives and store information using variables
- For example:
 - ▣ `let num = 123;`
 - ▣ `let str = "Enda B";`
- What if we want to represent something a little more abstract?

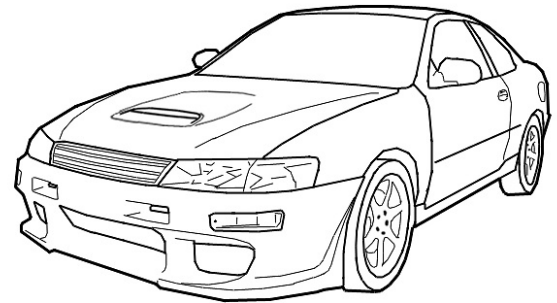
How would you represent these?

3



Sales person

Smartphone



Car

Objects / User Defined Objects

4

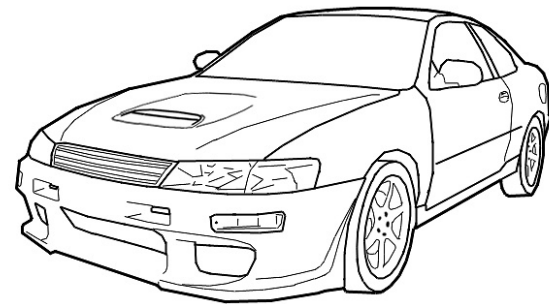
□ Sales person

- ▣ Name (String)
- ▣ Phone number (Number)



□ Car

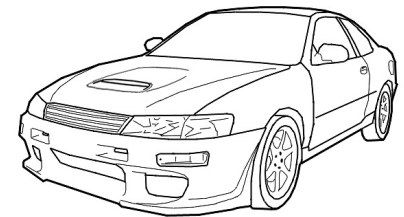
- ▣ Make (String)
- ▣ Model (String)
- ▣ Age (Number)



Object Example

5

- Objects are variables too, but contain many values
- **let** car = {make: “Ford”, model: “Mondeo”, age:2};
- The values are expressed in a *property:value* format



Accessing object properties & setting values

6

- The values can be accessed in two ways
 - ▣ `objName.property` or `objName["property"]`
 - ▣ `let car = {make: "Ford", model: "Mondeo", age:2};`
 - ▣ `let make = car.make` `// make = Ford`
 - ▣ `let anoMake = car["make"]` `// anoMake = Ford`

Simple example

7

```
<script>
function displayVehicles() {
  let vehicle = {make:"Ford", model:"Mondeo", age:2};
  let sHTML = "<b>";
  sHTML += vehicle.make + "<br>" + vehicle.model + "<br>" +
vehicle.age;
  sHTML += "</b>";
  clientSideContent.innerHTML = sHTML;
}
</script>
<button onClick="displayVehicles();">Show a Vehicle</button><br>
<div id="clientSideContent">Something here</div>
```

Show a Vehicle

Ford
Mondeo
2

Exercise: Put into table

8

- ❑ Modify the previous example (slide 8) to display the contents of the single vehicle object in a table.
- ❑ Use Bootstrap to style it something like below (<https://getbootstrap.com/docs/5.0/content/tables/>)

#	First	Last	Handle
1	Mark	Otto	@mdo
2	Jacob	Thornton	@fat
3	Larry	the Bird	@twitter

JAVASCRIPT ARRAYS




Arrays

10

- Arrays can store multiple values within a single variable.
- It is a special variable that is suited for storing lists of items.
- **let** array = ["Enda", "Barrett"];
- **let** array = [];
- You define it using square brackets

Arrays cont.

11

- Each item within the array is known as an element
- **let** array = ["Enda", "Barrett"];


Element 0 Element 1
- Array elements can be accessed by referencing the correct index position
- **let** fullName = array[0] + "" + array[1]

Adding array items

- When initializing an array you can add values but you may wish to add more throughout the program's execution
- This can be achieved by specifying an index position and assigning a value to that position.
- **let** array = ["Enda", "Barrett"];
- array[2] = "Peter";
- array[3] = "Devon";

Removing array items with splice

- **let** array = ["Enda", "Barrett"];
- array[2] = "Peter";
- array[3] = "Devon";

- array.splice(1, 1);

Start index
position

Number of
elements to
remove

Arrays (push, pop) with Objects

- An array can also store objects
- **let** array = [];
- **let** car = {make: "Ford", model: "Focus", year: 2, mileage: 10000}

- **array.push(car);**

← Adds car to
the end of
the array

- **array.pop()**

← Removes the
last element
of the array

Exercise: Arrays

15

- ❑ Create an array of 5 objects such as vehicles etc.
- ❑ Each object has a make, model, year and mileage property.
- ❑ Populate it with mock data
- ❑ Using a loop iterate over the array of objects and place them in tabular form on your web page

#	First	Last	Handle
1	Mark	Otto	@mdo
2	Jacob	Thornton	@fat
3	Larry	the Bird	@twitter